

CLAIMS

1. A device generating a random signal,
characterized in that
it includes a transient-state electronic circuit and furthermore means (112) to control the operation
and/or the shutdown of said circuit in order to generate a random signal at said circuit's output.
2. Device as claimed in claim 1, characterized in that the circuit
comprises semiconducting logic elements.
3. Device as claimed in claim 2, characterized in that it comprises an
oscillator circuit including semiconducting elements and means controlling operation and/or
shutdown of said circuit.
4. Device as claimed in claim 3, characterized in that the output of the
oscillator circuit (11) is looped (113) to its input.
5. Device as claimed in claim 4, characterized in that the oscillator
circuit comprises means constituting the inverter (111) and inverting at its output (111a) the signal
applied to its input (111b) and further includes a loop between its input and output.
6. Device as claimed in claim 5, characterized in that means controlling
the operation or the shutdown of the oscillator circuit include means (112) acting as switches and
situated in the loop between the output of the inverter-constituting means and the oscillator-circuit
output.

7. Device as claimed in either of claims 5 and 6, characterized in that the means constituting the inverter comprise a plurality in the form of an odd number of inverters (111).

8. A device comprising logic circuit(s) to generate a random signal, characterized in that said device comprises several sub-assemblies (11a, 11b) claimed in one of the above claims for the purpose of continuously generating said random signal, furthermore elements (21, 22) to consecutive and alternately control the operation and the shutdown of the transient-state circuit of each of said elements, and also an element (20) to AND, OR or XOR the outputs from the different elements.

9. Device as claimed in claim 8, characterized in that the ANDing, ORing or XORing elements apply to the outputs of the different elements a gate of the EXCLUSIVE OR type.

10. Device as claimed in claim 9, characterized in that the control means include at least one counter (21) receiving at its input the output from the elements combining in turn ANDing, ORing or XORing the outputs of the different elements, further including means controlling the operation of the shutdown of the semiconducting elements of said devices as a function of the counter's countdown.

11. Device as claimed in one of the above claims, characterized in that it is incorporated into a specific or into a programmable integrated circuit.